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ABSTRACT

An action research study that offered students in sixth form, college of education, and university a framework and context for exploring and reviewing their reading-for-learning competencies led to significant improvement on a battery of measures. This paper draws attention to and makes explicit the psychosocial events within the action research study that appear to have triggered an ongoing competence in learning. These events are analyzed in terms of a participative research model involving "learning conversations," in which learners reflect on their learning, and researchers monitor this while reflecting on their own management of the conversation. The researchers' function is described as mirroring the process to the learners. Various forms of a learning conversation are discussed, and the process as a whole is contrasted with traditional research methods. (AA)

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TOWARDS A THEORY OF LEARNING CONVERSATION
AND
A PARADIGM FOR CONVERSATIONAL RESEARCH

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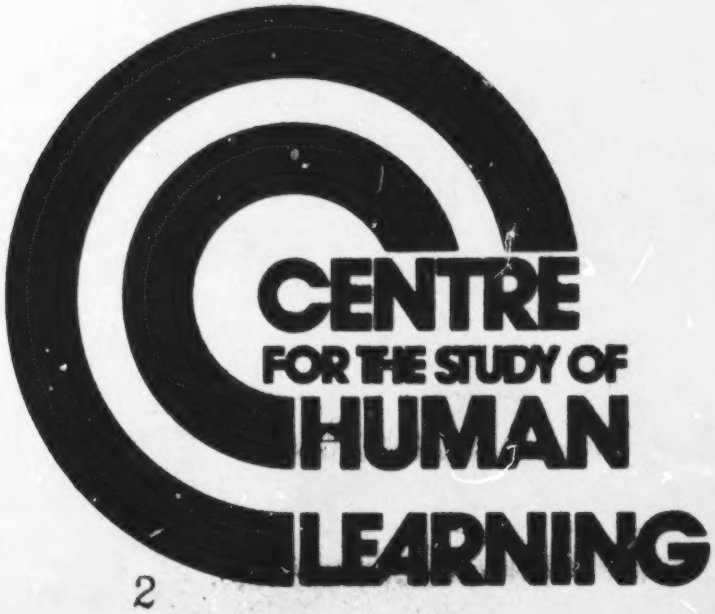

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PAPER IN SYMPOSIUM ON TUTORIAL CONVERSATIONS

C 5003 Sa4

TOWARDS A THEORY OF LEARNING CONVERSATION AND A PARADIGM FOR CONVERSATIONAL RESEARCH

Summary

A researcher's learning experience as participator in and monitor of an action research study on Learning-to-learn has led to the formulation of a theory of Learning Conversation and of a paradigm for Conversational Research.

The focus of the conversation is the reflection of process, the learner reflects on his learning, the researcher monitors this and reflects on her management of the conversation. The researcher mirrors the learning process and this leads to heightened awareness. The learner explores and reviews his competency. The mirroring tools consisted of a Reading Recorder, a method for displaying Structures of Meaning, and a Purpose Taxonomy and Hierarchy. These can be regarded as consciousness-raising devices.

The Learning Conversation is trimorphic. The three forms of dialogue are, 'Commentary on Process', 'Supporting the Learner's Reflection', and 'Referents for Evaluating Competence'. The management of each dialogue depends on a different set of rules. These have been made partially explicit. In managing the conversation the researcher makes available the resources and controls the three forms of dialogue. As the learner moves toward self-organisation he learns to articulate these for himself: he internalises the dialogues.

A participative method of research involving a Learning Conversation enables the learner and researcher to act as human measuring instruments in the learning situation. The success of the conversation is measured IN PROCESS, by the degree to which the dialogues are internalised. Traditional and participative methods of research lie on two ends of a continuum. At one end the researcher takes over responsibility for the controlling the conditions, recording the measures and interpreting the results. At the other end, this responsibility is passed over to the learner and the researcher takes on an advisory role. Awareness raising tools makes it possible for the learner to reliably and validly measure his changing inner state. A model of Learning Conversation provides a paradigm for Conversational Research.

TITLE

Towards a Theory of Learning Conversation and a Paradigm for Conversational Research

INTRODUCTION

An action research study (Thomas & Augstein 1975) concerned with offering sixth form pupils, College of Education and University students, a framework and context for exploring and reviewing their Reading-for-Learning competences, showed significant improvements on a battery of measures. Academic change provided a longer term and wider ranging assessment. Fig. 1 illustrates how one experimental group of 9 students all moved upwards on a twelve point grading scale. The control group moved both up and down. These grades represent an average for five formal college assignments.

Fig.1

A questionnaire designed to diagnose changes in habits and attitudes towards Reading-for-Learning showed that as a result of the learning experience offered students questioned what they read more, planned their reading more effectively, made better use of note-making sessions, became more flexible in their use of strategies and enjoyed their reading much more.

Matched objective tests and free response questions given immediately before and after the Reading-for-Learning sessions, showed improvements in a wide range of cognitive abilities (Bloom 1956). For example, pre and post-learning objective tests showed a significant improvement in literal knowledge, i.e. knowledge of specifics or facts. An ability to select and summarise the text also showed significant improvement.

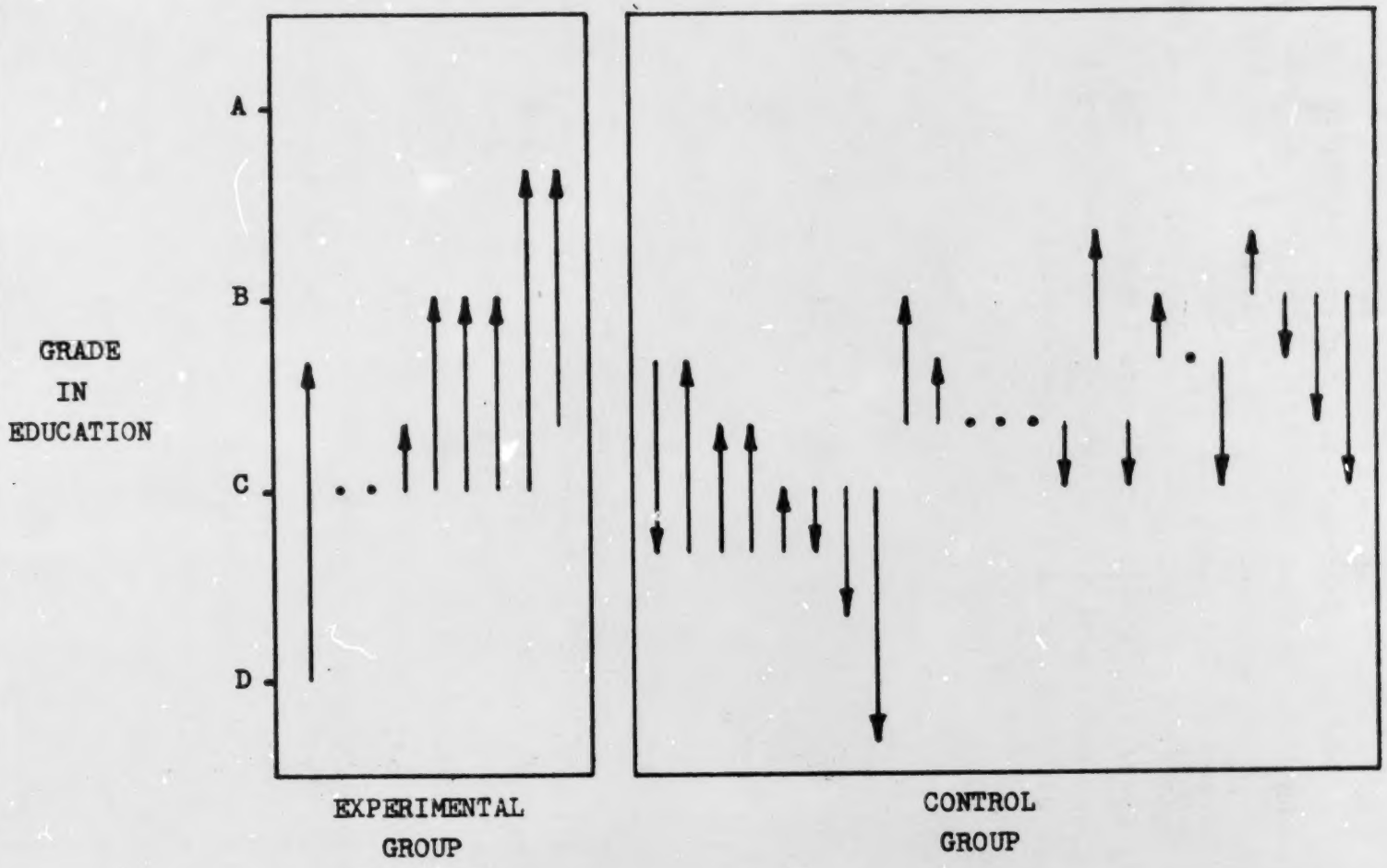


Fig 1(a)

Fig.2 illustrates the improvement for each student from the pre to the post test on both factual and main theme scores.

Fig.2.

The purpose of this paper is two-fold. It draws attention to and makes explicit, the psychosocial events, within the action research study, which appear to have triggered off an ongoing competence in learning. The psychological events refer to the process of learning and the social events refer to the interaction between the researcher (or teacher) and the learner or student in the Learning-to-learn situation. The improvement in academic performance coupled with student and staff reports suggest that an increased capacity for learning, (i.e. learning-to learn) has enabled students to make much better use of a wide range of prospective learning experiences, (viz. reading, listening, writing and discussion). Fig. 3 illustrates this point, diagrammatically.

Fig.3

A close parallel can be drawn between the psychosocial events and the'experimenter effects' phenomenon (Rosenthal 1963). In recognising these experimenter effects, the researcher can

CHANGE IN STUDENT RESPONSES TO A QUESTIONNAIRE

ADMINISTERED BEFORE COURSE

AND THREE MONTHS LATER

I find words and sentences easy to read	←-------	I often stumble over unusual words and long sentences
I read for main ideas	←-------	I read to remember facts
I question what I read	←-------	I accept what I read
I read fast	←-------	I read too slowly
I am flexible in using various methods of reading-for-learning	←-------	I always read in the same way
I plan my reading	←———	I seldom plan my reading
I search for organisation	←———	I take a text as it comes
I like reading-for-learning	←-------	I dislike reading for learning
I take fewer notes	←-------	I take many notes

Fig 1 b.

Fig 2. — EXPERIMENTAL CHANGE

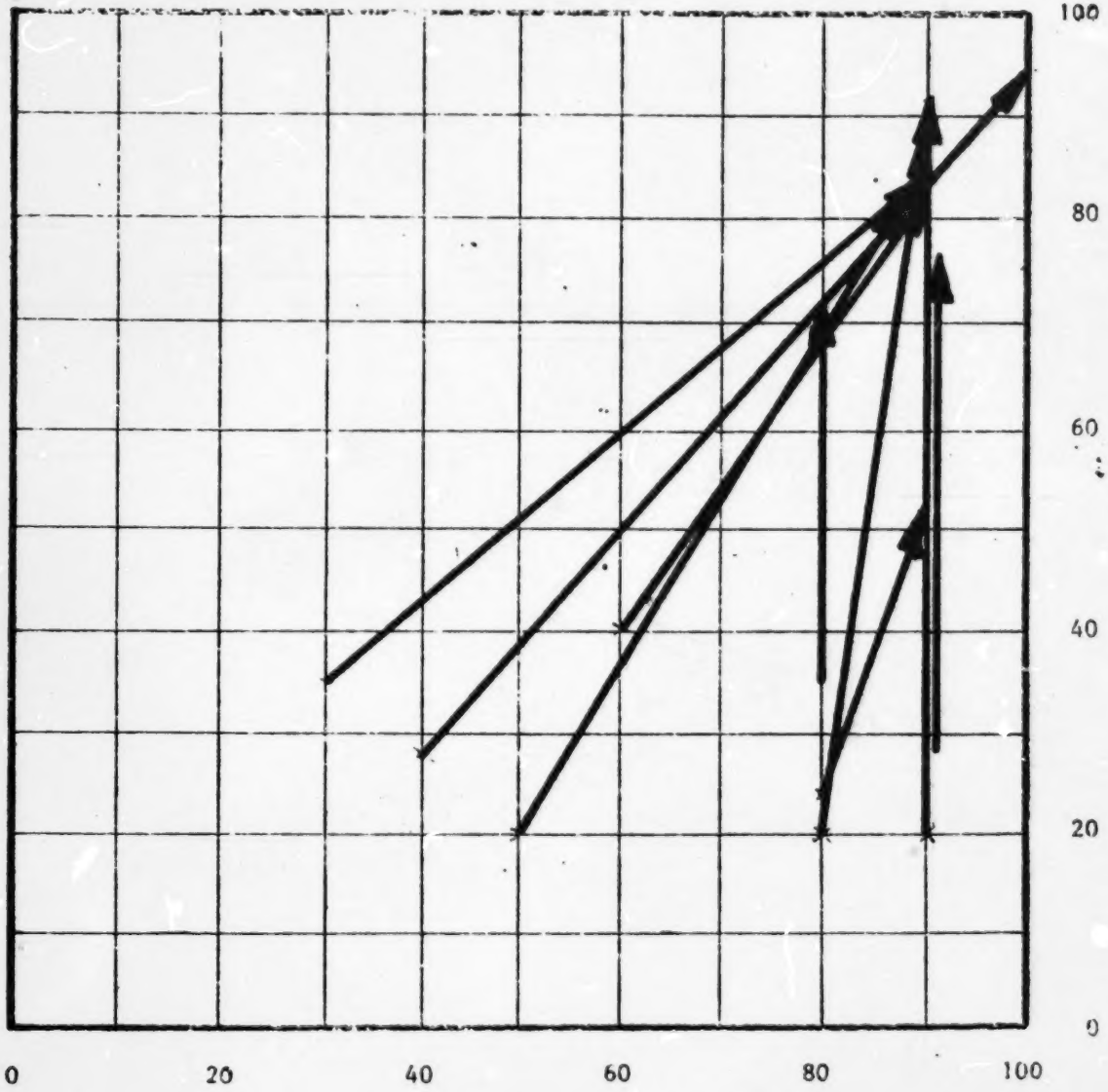
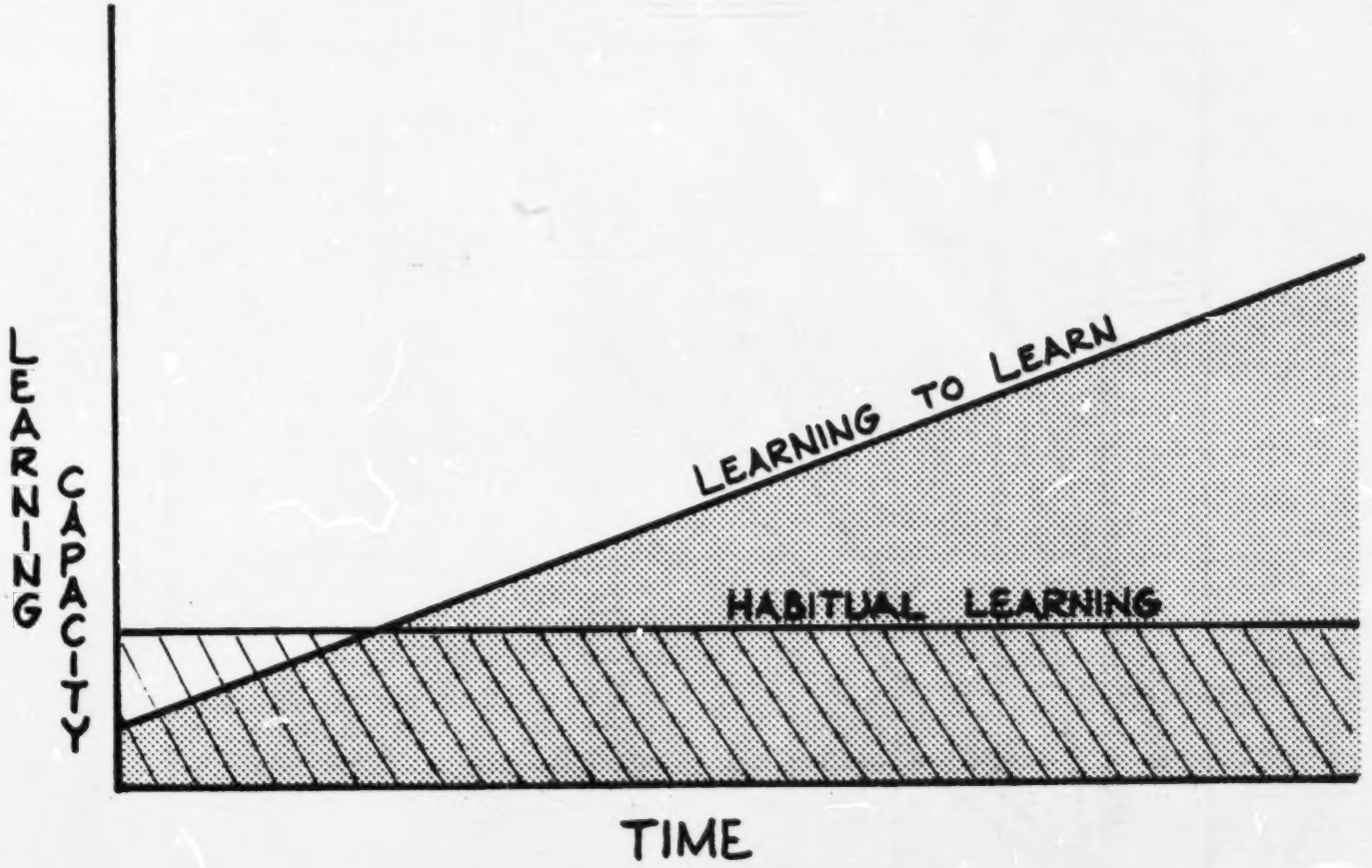


Fig 3. Ongoing Competency in Learning.



Action Research and the Conversational Event

Early in the study it was recognised that offering students these tools and reading materials was not enough. In mediating between the student and these resources the researcher became involved in the psycho-social (teacher/learner) events. This mediation is henceforth referred to as the Learning Conversation.

Conversational events involving Read Records and Flow Diagrams have been conducted at many levels of text organisation and across a range of reading purposes. These events took place over a period of two years with several groups of students. One particular event involving a Read Record and Flow Diagram of a single sentence is reported. This serves to illustrate how the researcher attempts to MIRROR the displays of process to the learner encouraging him to introspect (i.e. to reconstruct his Reading-for-learning experience).

Fig.4.

Fig. 4 shows a record of a sixth form biology pupil reading a sentence from a chapter 'On the struggle for Existence' from Darwin's 'Origin of Species'. He was reading it in order to identify and abstract the main idea. He was unfamiliar with the theory of Natural Selection. The subject matter of the sentence deals with the abstractions of one of the most important concepts within the theory. In dealing with the highest level of knowledge (Bloom 1956) the semantic structure of the sentence is complex. Numerous phrase structure and transformational rules operate to generate the complex surface structure (Chomsky 1957). The sentence has therefore a complex syntactic and semantic structure. The recorder shows how four read tactics combine to give, in this instance, an effective strategy.

consciously observe and manipulate them. By encouraging the learner to take control of his own learning, the learner as well as the researcher, becomes involved in these events. This approach emphasises the need to accept and use both researcher and learner as human measuring instruments in the experimental learning situation.

This paper draws attention to this important issue and later questions the validity and reliability of 'before and after' measures. A participative method of research mediates against a systematic before and after measurement of matched groups and controlled variables. This paper highlights the changing role of the researcher as participator in, and monitor of, the learning situation, rather than as controller of experimental conditions and points towards a new research parodigm for the human learning experiment.

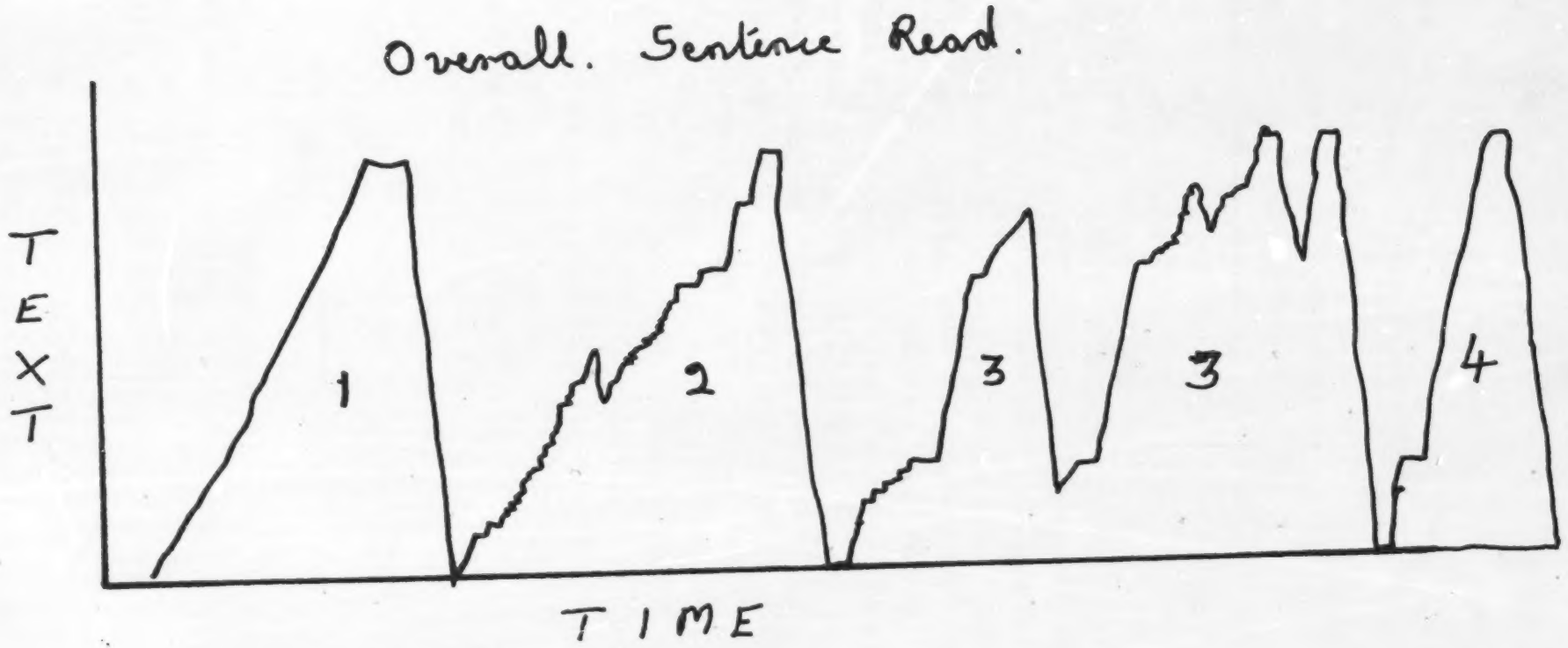
An assumption

The study is based on one important assumption; in order to learn from a learning experience, people must become aware of the process through which their skills play themselves out in action. However, being a spectator of one's own process, is very difficult to achieve. In Reading-for-learning it is necessary to acquire the skill of dividing one's attention between the meaning of the text and how one is attributing that meaning to it. This skill in self-observation derives from a language in which to describe and analyse one's reading experience and behaviour. The approach has been to offer a Model which provides such a language and also tools, which reflect back to the learner different aspects of his Reading-for-learning process. These tools can be considered as consciousness raising devices.

The Tools

The Reading Recorder (Thomas & Farnes 1972; Augstein E.S. 1971) provides a record of how a text is read and offers the learner an opportunity to introspect the process in which the eyes move over the page. The Flow Diagram technique (Thomas 1972) provides an opportunity for the reader to display the Structure of Meanings he is attributing to the text. A Purpose Taxonomy and a Purpose Hierarchy (Augstein 1971) provide procedures for articulating purpose.

Fig 4. Overall Sentence Read.



1, 2, 3, 4 = Read Tactics

Fig.5.

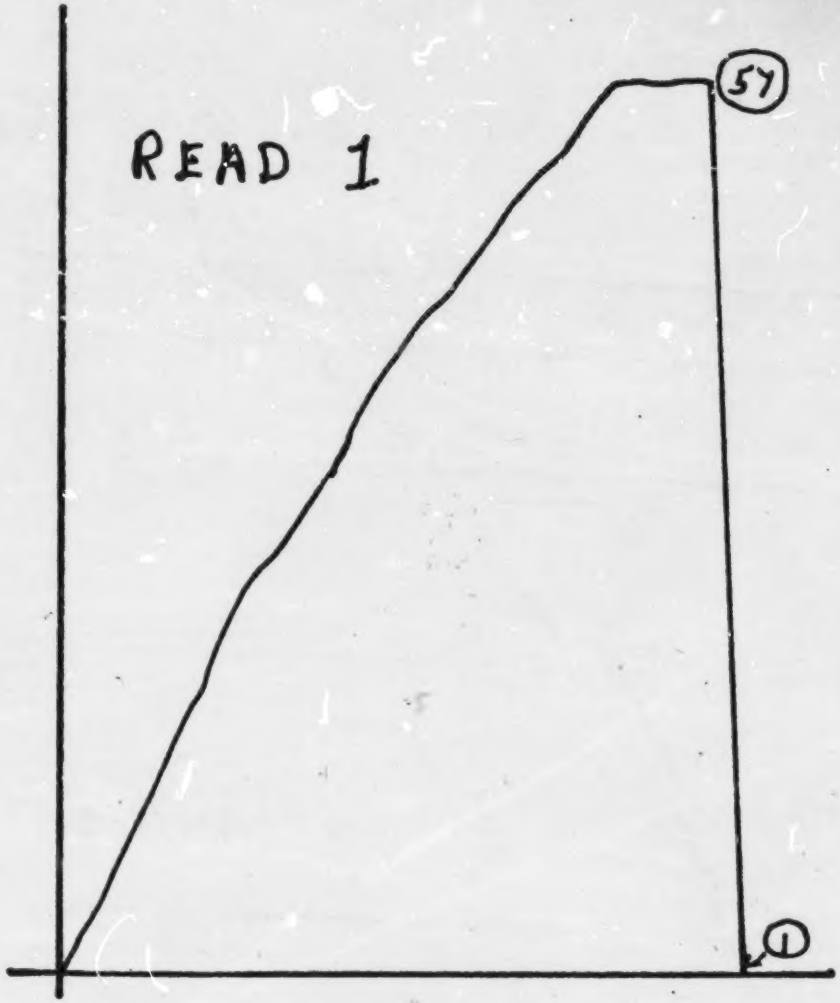
Fig. 5 provides a more detailed display of the first read tactic. In this Smooth Read the pupil reported that he was aiming to arrive at a synopsis of the sentence. When asked what he was doing during the hesitation at the end of the read he said:- "I find this very difficult... I'd only the vaguest idea of what the sentence was about.. I couldn't begin to think in terms of my purpose... I think I was trying to sort out a plan of action.. but all I can really say is that I knew I had to read it again".

Fig. 6

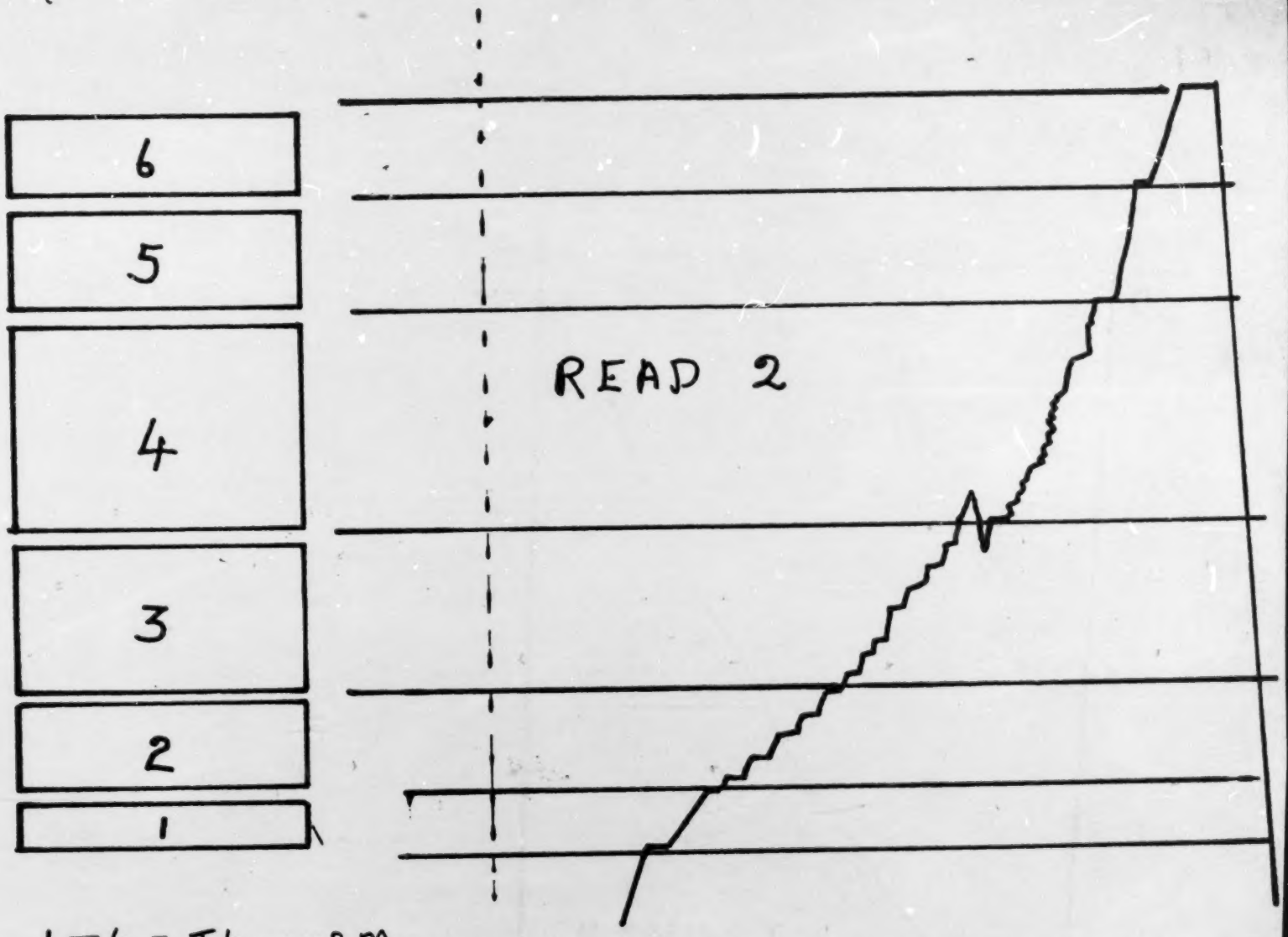
Fig. 6 shows that he used a different kind of tactic in his second read. However, the sentence is still processed linearly, i.e. he reads from the beginning to the end. He groups certain words into 6 phrases or 'items of meaning' and at the end of each item he reported that he was "checking the meaning of that item in my head." Extra attention was given to item 2 "because this was a key phrase and relevant to my purpose". Items 3 and 4 were sub-grouped into word clusters or

Fig 5. Tactic one - a Smooth Read.

1 (1) Owing to this struggle variations, however slight, and
2 from whatever cause proceeding, if they be in any
3 degree profitable to the individuals of a species, in
their infinitely complex relation to other organic
4 beings and to their physical conditions of life, will
5 tend to the preservation of such individuals, and will
6 generally be inherited by the offspring.
(57)

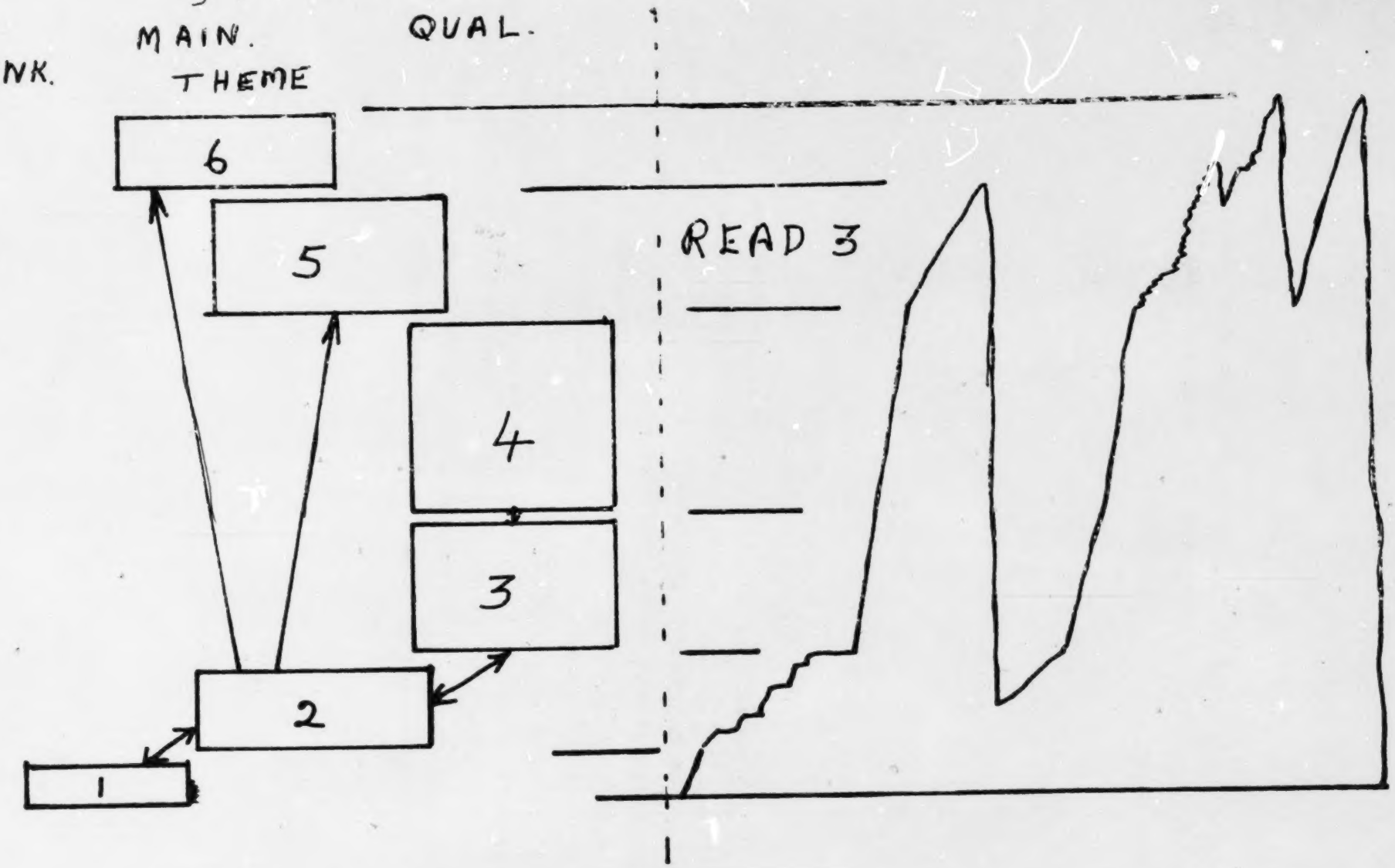


• Fig 6 Tactic two – An Item Read.



1 – 6 = Items of Meaning.

Fig 7 Tactic three — A Search Read.



1 — 6 = Items in the Flow DIAGRAM

single words because "I got bogged down with the detail, and I had difficulties sorting out the terms and complicated phraseology".

Fig. 7

Fig. 7 shows that in his third read the pupil executed an entirely different kind of read tactic. He is being much more selective and search patterns appear in the record. In mapping the Flow Diagram on to the Read Records it was apparent that he was relating items 2,5, and 6. These, he identifies as the key idea. This coincides with the main theme on the Flow Diagram. It is by no means always the case that there is an immediate agreement between an offered Flow Diagram and the Structure of Meaning generated by the learner. Part of the Learning Conversation is concerned with negotiating meaning by using the Flow Diagram and Read Record to achieve a shared understanding.

Fig. 8

In the fourth read tactic the pupil reads smoothly and quickly (Fig.8). However, in contrast to the first Smooth Read an entirely different cognitive process is taking place in the learner's head. This is a'Check' Read. The pupil said that he was generating a meaning compatible with his purpose. In the hesitation at the end he said: "I was recalling the main idea in my own words".

During this introspection the pupil discovers that processing a complex and (for him) difficult sentence to achieve a satisfying outcome depends on:-

(a) orienting to the general message,
(b) sampling the sentence for relevancy,
(c) selecting and reorganising the items of meaning, and
(d) checking meaning against purpose.

In the ongoing Learning Conversation he discovers that many factors contribute to influence the eyeball to print interaction and the attribution of structures of Meaning, for instance:-

(a) his interests, prior knowledge and the way he defines his purpose
(b) his processing skill and the structure of the text and
(c) the criteria he uses for evaluating reading outcomes.

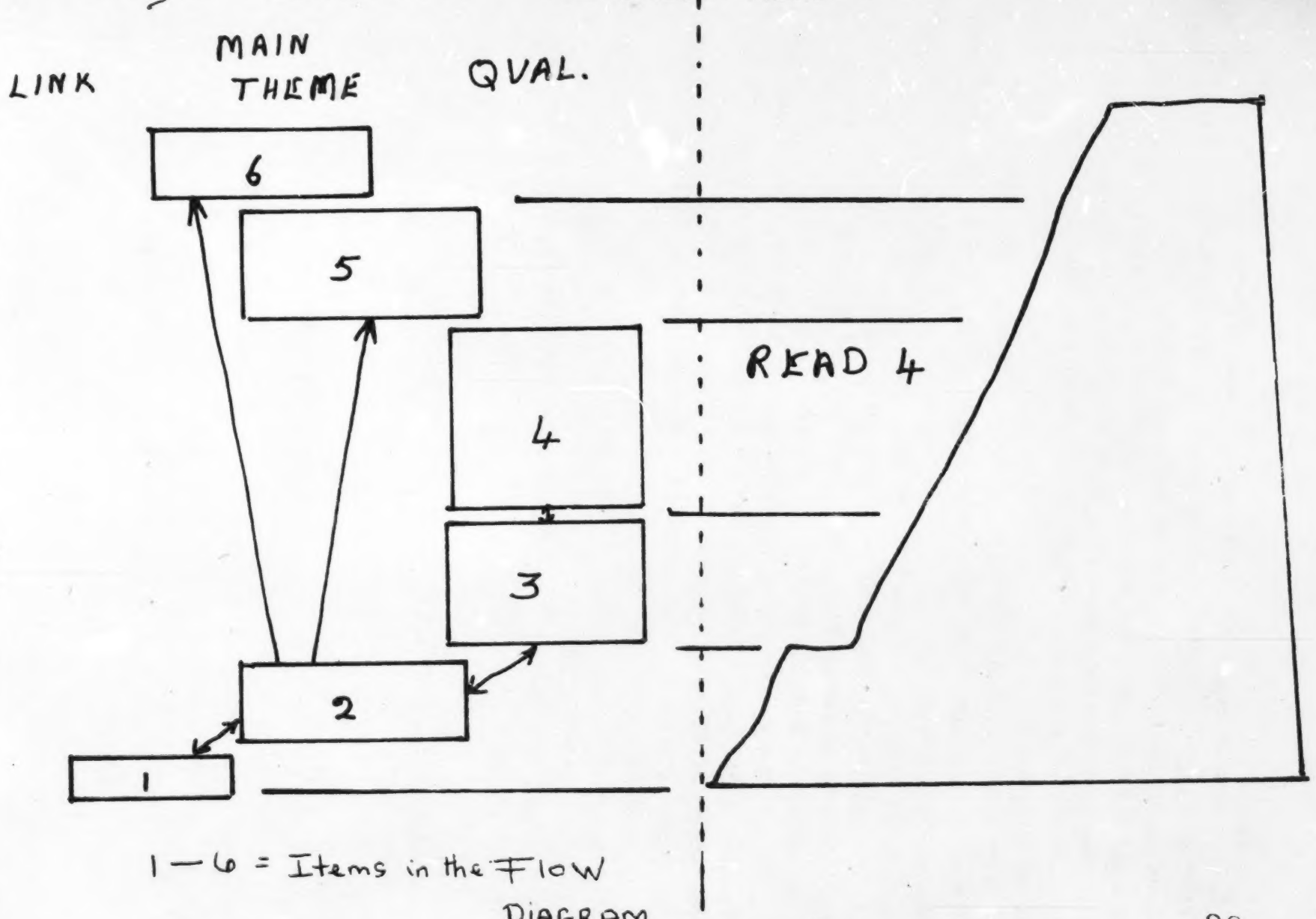
Finally, the learner recognises that the 'language of awareness' has helped him to be a spectator of his own Reading-for-learning process.

Implications: Towards a Theory of Learning Conversation

The researcher's learning experience as participator in and monitor of conversational events is presented as a metacommentary out of which a theory of Learning Conversation is developed. This provides the foundation upon which a systematic methodology for Learning-to-learn can be built.

The focus of the conversation is the reflection of process; the learner reflects on his learning; the researcher monitors this whilst reflecting on her management of the conversation. The researcher's function can be described as MIRRORING THE PROCESS TO THE LEARNER . Mirroring leads to heightened awareness and this enables the learner to explore his skill, so that he moves toward greater competency and creativity.

Fig 8 Tactic Four - A Smooth Read.



1 — 6 = Items in the Flow DIAGRAM

The language of mirroring is trimorphic, generating three forms of dialogue: one dialogue deals with a COMMENTARY ON PROCESS; another with SUPPORTING THE LEARNER DURING REFLECTION, and the third dialogue is concerned with REFERENTS FOR EVALUATING LEARNING COMPETENCE. (Fig.9)

Fig. 9

The management of each dialogue depends on a different set of rules. These rules have been partially worked out.

Dialogue 1. Commentary on Process

This takes place at two levels. At one level a process and feedback language is being negotiated. The learning process is observed using the hard evidence provided by the awareness raising tools, and a theory offered by the researcher. The whole process is reviewed for effectiveness. PURPOSE, STRATEGY OUTCOME, REVIEW (PSOR) became components of this process language. At another level the researcher offers a metacommentary on this language negotiation. The importance of developing a theory (or model) for interpreting the evidence of the records is stressed. (A PSOR model becomes one of "n" possibilities as the researcher and learner negotiate). The need to generate one's own feedback is also emphasized. MODEL AND FEEDBACK BECOME THE COMPONENTS OF THIS METACOMMENTARY.

Whilst the RESEARCHER IS OFFERING THIS METACOMMENTARY ON PROCESS, THUS RAISING THE LEARNER'S AWARENESS OF IT, SHE IS ALSO PROVIDING THE EXPERIENTIAL TOOLS, FOR THE LEARNER TO COMPREHEND IT.

Fig 9. Towards a theory of learning conversations

The forms in the Language of Mirroring

1. Commentary on Process
2. Support during the uncertainties of reflection
3. Referents for reviewing learning competence.

A characteristic feature of this dialogue is THE MARKED ALTERNATION BETWEEN EXTERNALLY OFFERED FEEDBACK AND SELF-GENERATED FEEDBACK. Whenever the learner was unable to generate feedback the researcher intuitively offered this. It was realised, retrospectively, that this dimension of structure and freedom was crucial for the process dialogue. The question is whether the learner's view of the teacner as a source of structure is an expected stereotype for that which should pertain in a learning process, or is it a relevant intrinsic part of the process? This issue of when to offer freedom was monitored throughout the study. In helping the learner to generate his own dialogue by constant metacommentary on process, a shift towards personal autonomy took place. The learner began to set his own Purposes, interpret the Read Records, evaluate Outcomes and review the Whole Process. He INTERNALISES THE PROCESS DIALOGUE. HE GENERATES HIS OWN LANGUAGE, SELECTS HIS OWN FEEDBACK AND BECOMES DISCIPLINED IN ASSESSING HIS OWN COMPETENCY.

The Management of this structure - freedom dimension of the dialogue is polymodal. This involves moving between directive, guided and discovery modes. Directive intervention involves the researcher in taking over the interpretation of the Read Records. In guidance a PSOR model is offered within which the learner interprets his own Read Records. For discovery, the learner is encouraged to develop his own model for interpreting the Read Records. The researcher takes on the role of mentor, offering counter arguments or propositions or even occasionally as madonna, shielding the learner from structure, whilst he generates his own.

The management rules for this dialogue remain largely intuitive, but relate to a catalytic view of mirroring. The overall management aim is to CATALYSE THE LEARNER'S OWN STRIVINGS FOR AWARENESS, enabling him to invent his own construings of his learning process and to generate his own personally relevant feedback. Fig. 10 summarises this commentary on process.

Fig. 10

Dialogue 2: Supporting the Learners during Reflection

People become uncertain when exploring their learning processes. They become overanxious when testing out the limits of their skill and understanding. In attempting to improve their level of proficiency they often start by getting worse! As a result they retreat into the safety and security of stasis or known routines of learning. THE SUPPORT DIALOGUE IS CONCERNED WITH HELPING THE LEARNER TO REMAIN A SPECTATOR OF HIS OWN PROCESS LONG ENOUGH TO EXPLORE IT IN DEPTH.

Many psychosocial factors are involved in support. Developing mutual trust in the tutorial relationship and 'buffering' the exploration of process are two outstanding events. Trust proved to be important in bridging that void between the uncertainty of being in process and the security of stasis. The researcher and learner worked hard and long to achieve this relationship. Assessing the boundaries of permissiveness in the dialogue proved difficult. Was it overindulgent or was it relevant to explore wide-ranging emotional, social and intellectual issues? As the student gradually recognised an honest intention to help him explore and review his own competence trust in the relationship developed.

In lowering awareness of stress the researcher'buffered' the learner's anxious state and this enabled him to convert the energy locked up in anxiety into creative tension. Thus supported he explored hitherto unknown areas of skill. Buffering depended on withholding structure and offering unconditional positive regard, empathy, and congruence (Rogers 1961) This often proved to be a most traumatic and exhausting experience for both participants.

Fig 10, 1. Commentary on Process

a. Negotiating a language for describing process and a metalanguage for reflecting on process.

b. Movement between offered feedback and self-generated feedback.

c. Structure & Freedom in the management of the conversation.

Managing support depends on developing sensitivity to the changing inner states of the learner. Cues such as posture, facial expression and remarks such as 'I hate Flow Diagrams', 'that Read Record is wrong - I didn't read that way' were used as indicators for moving into a support dialogue. Fig. 11 summarises this dialogue.

Fig. 11

Dialogue 3: Referents for Evaluating Learning Competence

Having encouraged the learner to develop a language for exploring process and supported his in depth exploration of it the researcher still leaves him with a dilemma. If he is to rely solely on his own evaluation how will the learner ever know the actual degree of skill which he has achieved?

He can compare with others THROUGH EXCHANGING AND DISCUSSING READ RECORDS, FLOW DIAGRAMS AND PURPOSES. In progressing through a sequence of personal, interpersonal and group review (Rogers 1973) the learner can relate his own assessment to a wider field of public assessment. Managing this dialogue is concerned with helping him to choose appropriate referents. This evaluation dialogue is summarised in Fig. 12.

Fig 11. Support during the uncertainties of reflection

a. Breakthrough to mutual trust.

b. Buffering: converting anxiety into creative tension.

c. Sensitivity to the state of the learner in managing support.

Fig.12. Referents for reviewing learning competence.

(a) Using yourself as referent.

(b) Using another as referent.

(c) Using a referent group

and Managing the choice of referents.

Any sample of Learning Conversation may contain components of any of the three dialogues. Obviously they interrelate complexly and richly in a conversational event. DURING THE CONVERSATION, THE RESEARCHER ACTS AS ARTICULATOR OF ALL THREE DIALOGUES, AS THE LEARNER EXPLORES THE RESOURCES. IN MOVING TOWARDS GREATER SELF-ORGANISATION THE LEARNER INTERNALISES THE DIALOGUES AND LEARNS TO ARTICULATE THESE FOR HIMSELF.

IMPLICATIONS: Towards a Paradigm for Conversational Research

One moves beyond the 'experimenter effects' of Rosenthal in identifying the 'psychosocial' events and in developing a science of Learning Conversation. THE SUCCESS OF THE CONVERSATION IS MEASURED IN PROCESS BY THE DEGREE TO WHICH THE DIALOGUES BECOME INTERNALISED, BY THE LEARNER. This trivialises the 'before-after' measures, such as those reported in the Introduction. These 'objective measures' typify the more orthodox psychological experiment.

Traditional and Conversational methods of research can be seen as opposite ends of a continuum. The job of measurement exists across the continuum: what varies is; who sets the criteria, records the measures, interprets the results? At one end of the continuum the researcher contracts to take all responsibility and treats the learner as an object to be manipulated. Along the continuum the contract is shared in various ways, the learner takes on more and more of the responsibility and the researches take on a monitoring role. This trend is in keeping with the Polanyi-Rogers contemporary view (Polanyi 1958) that subjective experience must be recognised and valued in the human learning experiment.

Measuring events in the learning situation does not mean a return to the softness of introspection. We have been able to show that equipped with tools and procedures the changing inner state of the learner can be reliably and validly measured. Participative methods involving Learning Conversations provide a new paradigm for the human learning experiment.

The Impact of the Theory of Learning Conversation on Education

This decade marks yet another crossroads in the changing pattern of our educational idealogies, Conservative tenets which have dominated policies for so long have failed because these were based on a pessimistic view of man. Fixed within his genetic inheritance and imprisoned within a rigid and powerful social hierarchy in which he seeks to identify himself, man's freedom is limited to that which is accepted and tolerated within society. His socialisation and education condition him into acceptance and his individuality suffers. At best, this approach has achieved a status quo between man and society. At worst, it has created conditions in which student revolt, stress and alienation arise.

What is called for is a change in the trajectory of educational ideals towards the more radical tenet that 'man makes man' and is therefore capable of far-reaching changes in his nature. A Learning-to-learn methodology based on a science of Learning Conversation opens up a new perspective and offers an important step towards substantiating this radical tenet. The impact of this fresh approach towards the pedagogy of learning in the school, college and university, for the individual and in the long-term perspective for this crisis-ridden technological society as it moves towards 'Doomsday' is an exciting challenge.

Sufficient evidence already exists to be able to forecast that new conversational procedures and tools for shaping human destiny through wisdom and foresight can emerge. (Bruner 1964, Pask 1969, Kelly 1955, Thomas and Augstein 1975, Rogers 1961) No longer need man's future be determined by Malthusian type checks or by catastrophes brought about by his own mismanagement.

Through the looking glass individual learners, from eight year olds upwards can develop competency far greater than that micro educational ideal of an upward shift of ten points on an IQ scale or that micro psychological ideal of 30-50% on statistically objective 'before-after' tests. They can improve by 300-500% and more when this is defined in their own terms. This applies not only to the 'selected few' but to each and everyone.

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